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Participants at the IXth Australasian Bryophyte Workshop

Back Row: Wilf Scholfield, Blanka Shaw, Jon Shaw, Maia Mistral, Eric Whiting, Wolfgang Frey, Peter Beveridge, Mary Gibson, Rowena Whiting, John Steel, Pat Brownsey, Helen Ramsay, Matt Renner, Chris Cargill, Darea Sherratt, Rodney Lewington, John Braggins, Susan Hansard, Jessica Beever, David Meagher, Helen Rommelaar & Rosemary Lovatt.
Middle Row: Bill Buck, Niels Klazenga, David Glenny, Matthew Dell, Bill Malcolm, Nancy Malcolm, Jim Shevock, Graham Bell, Pina Milne, Mariana Ferreira, Lynette Fischer, Lisa Montero, Lyn Cave, Helen Jolley, Peter Wellman, David Tng, Endymion Cooper.
Front: Ross Beever, Paddy Dalton, Linda Bester, Allan Fife, Karen Beckmann, Emma Pharo, Elizabeth Brown & Rod Seppelt.

Editor's Note: The IXth Australasian Bryophyte Workshop hosted the largest group of participants to gather for a workshop. I thank Rodney Lewington for providing a report on the week's activities and to Ross Beever, Allan Fife and John Braggins for some of the images. I hope you enjoy reading and viewing what took place.
I suggest you try the webpage to locate a coloured pdf version of this newsletter – you will not be disappointed ……...Paddy Dalton

IXth Australasian Bryophyte Workshop

Maydena, Tasmania, 3rd to 8th December 2007

Maydena and the South West National Park in Tasmania, may seem a long way, whether you start from the Australian mainland, New Zealand, North America or Europe. However, that did not stop some 55 bryologists attending this workshop organised by Paddy Dalton and his team of helpers from the University of Tasmania. Attendees included 32 from Australia, 1 each from Canada and Germany, 17 from New Zealand and 6 from the USA.
The main group assembled at the School of Plant Science at the University of Tasmania campus in Hobart. After a buffet lunch, we were welcomed by Prof. Jim Reid, Dean of the Faculty of Science, Engineering and Technology. Jim emphasised the benefits that would arise from the exchange of ideas and information between local and overseas bryologists.
Then it was into the vans for the drive up the Derwent River Valley and into the forested area of the South West National Park. Our accommodation was at the village of Maydena at the Giant's Table. Originally a timber workers camp this facility has been converted into a series of cottages offering comfortable accommodation (one cottage even running to a spa bath). A central building provides a restaurant and space for lectures. A further attraction was the platypus in the ponds behind the accommodation.
The routine was set on the first full day: breakfast in our respective cottages, collect our packed lunch and into the vans at 8.30 am, drive to the chosen sites and collect. Return to Maydena, sometimes by 2.00 pm and sometimes rather later, work on collections and then socialise until dinner, usually at 6.00 pm. The day finished with talks and, for some, more time at the microscope.

Field Trips:

The first day started with a drive by forest roads to Growling Swallet in the Florentine Valley. We bryologised from the start of the walking track through rainforest of mainly beech *(Nothofagus cunninghamii)* and sassafras (*Atherosperma moschatum*) with emergent *Eucalyptus regnans.* By lunchtime the slower members of the party managed to get to the point where the stream disappeared into the depths of the limestone. We did find *Truebia tasmanica,* which is known as a rare plant on this track. No collecting that here, just photographs.

Lunchtime at the Swallet. The entrance to one of the deepest limestone cave systems in Australia – 375m deep.

At Growling Swallet mosses on the emergent rocks in the stream included *Sematophyllum jolliffii*, *Fissidens integerrimus* and a species of *Blindia*.
Late that afternoon some of us took a short drive from the Giant's Table to Junee Cave where the stream emerged as a karst spring, having been through many kilometers of passage, caves and stream sinks since its dive at Growling Swallet. Others visited this site on subsequent days.

Some of us had to be dragged away from the "lab" for this trip. Tables and microscopes had been set up in the workshop cum implement shed. This provided ample opportunity to examine collections and exchange knowledge. Stacking chairs two-high in the "lab" was one way for the shorter people to reach the microscope eyepieces.

Bill Buck and David Meagher (above) utilize the "lab facility" to compare points of view, while John Braggins, Rodney Lewington, Rosemary Lovatt and David Meagher (right) take the opportunity to sort through the days collecting

On day two the destination was Mount Sprent with visits on the way to the Wedge River picnic area, Lake Pedder lookout and the Gordon dam. For those who felt fit enough the serious walking started just before noon from the Serpentine Dam (about 310m asl). A few made it to the summit of Mt. Sprent (at 1059m asl) whilst the rest of us maintained that the mosses and liverworts on the way were far too interesting. Consequently we found that time ran out before we had to turn around.

The bryophyte habitats on this walk changed with altitude. The start was in low bush (forest to our European friends), which reverted to scrubland and then a mosaic of low scrub and the endemic buttongrass sedgeland. Gullies with small streams and the underhangs of rocky out crops provided further variation of habitats for bryophytes. Good collecting with notable species of moss, *Campylopus chilensis* and *Dicranoloma eucamptodontoides*. (type habitat), while the liverworts *Heteroscyphus billardierei* & *Clasmatocolea notophylla* were in abundance.

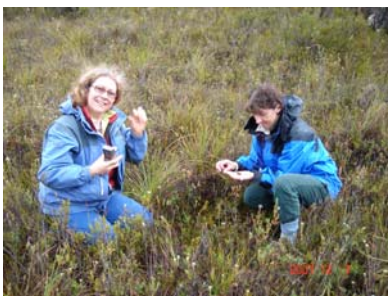
The climb to Mt Sprent was initially steep, but in perfect conditions, the mountain walkers were treated to superb views across south-west National Park.

Those who preferred not to climb to Mt Sprent explored the area near the Serpentine Dam and stopped at a number of points of interest on the return journey to Maydena. At one of these, epiphytic bryophytes on an *Acacia* species included *Daltonia splachnoides, Ulota lutea, Leptostomum inclinans* and *Calyptopogon mnioides*

Day 3 was much easier with short walks in the Styx Valley until lunch. This gave time to work in the lab in the afternoon (one suspects that some may have used the time for an afternoon nap). The *Eucalyptus regnans* forest along the Styx River Valley Walk provided some serious bryology. Later we walked the circular track round the Big Tree Reserve, gawped and photographed the large *Eucalyptus regnans* from which the reserve gets its name. The planned sortie into the Chapel Tree Walk was abandoned when we found the access gate locked.

Notable mosses seen included *Sphagnum australe, Thamnobryum pumilum, Ephemeropsis trentepohlioides* and *Goniobryum subbasilare.*

Day 4 dawned rather wet but the showers did not stop us visiting two sites to the SE of Maydena. First stop was at Fiveroad. A short walk on a forest road then a dive through the belt of manuka at the side of the road into a relatively open (callidendrous) forest of mature beech *(Nothofagus cunninghamii)* and sassafras (*Atherosperma moschatum*). Here the forest floor, fallen and standing trees provided us with ample specimens of mosses and liverworts.



The drive to Condominium Creek was made in the rain. Showers continued as we examined the buttongrass flats and the forested area alongside the creek. A few brave souls did start up the hill but all were back to the vehicles by lunchtime. Those who were prepared to get down and dirty were rewarded with good collections of Tasmanian endemics, *Pleurophascum grandiglobum, Dicranoloma eucamptodontoides, Tayloria gunnii*. and *Tayloria tasmanica*. These proved to be popular photographic subjects as seen here with Neils Klazenga (top left) and Karen Beckmann and Pina Milne (bottom left)

The afternoon was spent at the Giant's Table and this allowed ample time to work in the lab and to view and discuss in small groups the well-prepared posters that were on display.
In addition to the posters that were on display all week, there were presented illustrated talks each evening and on one afternoon. Looking at the programme a month after the workshop I am amazed at the variety of topics covered. Space does not permit a full enumeration.
For a person more interested in liverworts than mosses the more memorable were David Meagher's exposition on Australasian *Bazzania*, David Glenny's dilemma with a New Zealand liverwort of uncertain genus and Endymion Cooper's study of the *Telaranea centipes* species complex.
For those into mosses the more serious sessions were from Jon Shaw, on the *Sphagnum* section *Subsecunda* in Australasia and Alan Fife on the progress on the New Zealand Moss Flora. The place of bryophytes in regeneration studies were explained by Pep Turner (Styx and Florentine Valleys) and Mary Gibson (Dundas Tablelands, Western Victoria.). Matt Renner's exposition on "Why the Type Method gives Bryologists a Bum-Steer" brought forth some serious consideration of how a species should be defined. The conclusion (a consensus I think) was that a type specimen and description is inadequate to define a species. To fully define a species requires recognition of variation and more particularly a statement of the distinctions between what an author regards as a species and those species that are similar. One has to admit that this differentiation is now common practice in bryological literature. It will be interesting to see how Matt's ideas are accepted once he refines and publishes on this.

A variety of topics were covered in the excellent posters. Lisa Montero is seen here explaining her presentation to an enthusiastic group, Mariana Ferreira, Mary Gibson, Rod Seppelt and Lyn Cave.

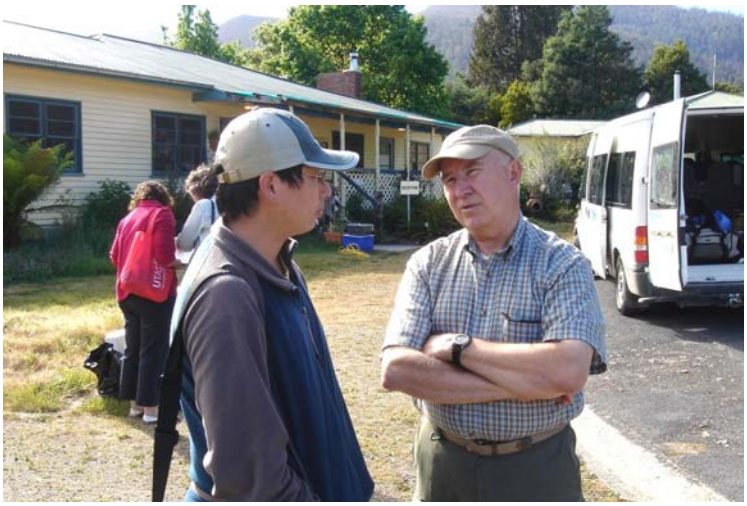
More Generally
Following dinner on the last evening there were some well-deserved thanks offered to the management, chef and kitchen staff of the Giant's Table. (The informality started about then when our landlady wanted to know "Why did the bryo fight?"). Formal business settling on future workshops did get completed under Paddy's firm chairmanship. David Meagher (by now accepted as our resident comedian) gave an illustrated resume on the workshop.
Then came the "prize giving". These awards were organised by David Meagher and Rod Seppelt to recognise, among other things:
Night owl award to Elizabeth Brown had spent many of the small hours at the microscope,
Red Cross award for meritorious service as a blood donor to Peter Beveridge who had harboured the largest leech,
Wolf Blass award to Pina Milne and Karen Beckmann for secretly consuming the supply of red wine,
Hilary/Tenzing award for being the first to ascend Mt. Sprent to Emma Pharo,
Puddle Duck award to Wilf Schofield in recognition of his aquatic exploits at the Growling Swallet,
Special award to Rosemary Lovatt for botanical confusion "look, the ferns are flowering",
and finally an extraordinary award to an unnamed participant, who had collected larger quantities of specimens than anyone else.

It was encouraging to find that our workshops now encompass the scope of generations. From the youngest Christopher Turner with mother Pep (top left), to the not so young Blanka Shaw from Duke University, USA and Emma Pharo from University of Tasmania (middle left) and to our happy octogenarians Helen Ramsay (Sydney) and Wilf Schofield (Canada)

Many of our younger participants have come into the discipline through the study of ecology. In part these younger people were at the workshop to learn but already had much to add - informally, in the poster displays and the lectures.

This workshop was especially notable for the addition of bryologists who had traveled from the northern hemisphere. The distance for travel was certainly a challenge but their presence and contribution greatly enhanced the collegial environment at the workshop.

Jim Shevock, who had traveled from California, is captured chatting to young Tasmanian bryophyte student, David Tng, prior to our departure from Maydena



Finally thanks are due for a very well run workshop to Paddy Dalton and his team. These included Rod Seppelt, Emma Pharo, Lyn Cave, Pep Turner and Alex Buchanan. (my apologies if I have missed anyone). From an attendees view the organisation was impeccable and implementation followed through with minimal hiccups.

Rodney Lewington, Wellington, New Zealand

The rare endemic moss *Ambuchanania leucobryoides* – a tale of discovery

During the 1980s, the Federal Department of Environment made special-project funds available to herbaria in certain states to assist in building collections from remote areas where the flora was poorly known. The then Curator of the Tasmanian Herbarium, Dr Tony Orchard, took the opportunity to send two collectors to the southwest coast of Tasmania where there were large gaps in our knowledge of plant distribution.

From 1984 to 1987 Tony Moscal and I systematically covered the coastal region from the Modder River in the north to Port Davey in the south. We worked out of base camps that were situated in small sheltered coves or river-mouths were a boat could land. About four weeks of each summer were spent on each section of the coast travelling on foot up and down the coast and as far inland as was practicable. We were most grateful to Chris Short, our friendly crayfisherman out of Kettering, not only for delivering us safely to the site of our base camp but, on some occasions, for moving us up or down the coast where we could establish a secondary camp and cover a longer stretch of country.

In 1987 we set off from Kettering in the *Stormalong*, with Chris at the helm, expecting to cover the coast immediately north of Port Davey. On the following day, however, the weather proved too stormy, a strong westerly was sweeping in, to make a landing on the more or less open coast. Instead, Chris put us ashore inside Port Davey, we landed our tents and equipment on a small beach at the mouth of Coffin Creek. Tony and I set up our camp in the shelter of the trees on a sandy flat just behind the beach and close to the fresh water of the creek. We had a large tent for living and working in and a smaller tent that housed the drier and specimen cases. We worked out of this camp for nine days from the 3rd of January, collecting in all the different habitats available.

On the last day, the 11th of January, I decided to climb a low but prominent hill to the south of our camp. In the valley on the far side of the hill I could see a large sandy wash, its white quartzite sand stood out in contrast to the surrounding peaty heathlands (photo left). This unusual habitat attracted my attention and I descended to the valley floor to have a closer look. A thin film of water covered the sand and the strands of a filamentous alga were caught amongst the sparse sedges and other higher plants scattered on the pan.

Then an even less conspicuous plant caught my attention, it looked like a small *Sphagnum*, just a few capsules were standing up from the leaf-tips, barely visible at the surface of the wet sand. On poking my finger into the sand I was surprised to find that most of the plant was in fact below the surface. In our years of collecting on the southwest coast, and always looking closely at unusual microhabitats, I had not noticed this moss before and assumed it must be very rare. I collected a handful of stems, including most of the fertile ones, and packed it with the many other specimens, ready for the voyage back to Hobart. (photo of Alex Buchanan at the type locality)

On the following day our fishermen friends arrived and our camp was quickly dismantled, all was bundled into the dingy and ferried out to the fishing boat standing safely beyond the rocky reef. Several more stops were made at points along the way, allowing further forays ashore, before reaching Kettering and Hobart on the 22nd of January.

Back at the Herbarium, I examined the unknown moss and ran it through a key to the genus *Sphagnum*, but it would not key out; the cell anatomy was unusual in lacking cross-walls. Having reached a dead end, I showed it to Rod Seppelt and he puzzled over it for a time before sending a piece to Prof. Zen Iwatsuki in Hiroshima. Nothing was heard for several months and then a manuscript arrived in which T.Yamaguchi, as principal author and student of Prof. Iwatsuki, had described the moss as *Sphagnum leucobryoides*. My habitat description and illustration of its natural habit (recognized by the "measles" on the sand surface, photo on left) were added to the manuscript and it was returned to Hiroshima for publication (Yamaguchi et al. 1990).

Although described under *Sphagnum*, the moss was clearly aberrant in this genus and family. Further work by Howard Crum at the University of Michigan showed that it differed from *Sphagnum* not only in its leaf anatomy and lack of branching but also in its elongate, rather than spherical, antheridia. On this basis Howard Crum and Rod Seppelt decided that its placement in Sphagnaceae could not be maintained and they erected a new genus, family and order to accommodate this taxonomically isolated species from far southwest Tasmania. Thus the new combination, *Ambuchanania leucobryoides* in its own family and order, Ambuchananiales Seppelt & H.A.Crum, was published (Crum & Seppelt 1999) followed by a necessary validation (Seppelt and Crum 2006).

Meanwhile, questions about the genetic relationships of this moss were being asked and molecular bryologist, Jon Shaw, obtained a small amount of dry material for testing. Preliminary results confirmed the validity of its separation from *Sphagnum* but further material was needed to better determine its phylogenetic position. Following requests from Jon Shaw and Jeff Duckett for living material, a field trip was organised, in March 2008, by Jane Balmer and Jennie Whinham of DPIWE during which I was able to relocate the site of the original collection, 21 years earlier. As well as collecting living material for analysis, we located two other populations on the west and south coasts. During the same summer another population was found by Penny Tyson, well to the north of the Port Davey area. These successes led to a search in, seemingly, likely habitats accessible from the Strathgordon and Scotts Peak Roads but, despite careful searching, none was found. Also, a re-examination of the specimen from the Jane River track, previously thought to belong to this species, showed it to be a small branch of *Sphagnum novozelandicum*, adding to the evidence that *Ambuchanania* does not occur in inland sites in southwest Tasmania. All known populations are in near-coastal situations and it appears that the quartzitic sandy habitat is restricted to the coastal zone; perhaps proximity to the sea is required for nutrient availability in this otherwise low-nutrient environment.

The living plants sent to Jeff Duckett and Jon Shaw have provided ample material for further analysis. Reports from Jon Shaw (pers. comm. April 2008) confirm the earlier findings of significant genetic distance between *Sphagnum* and *Ambuchanania*. His sequencing includes nuclear, chloroplast and mitochondrial loci and in some cases, the primers that he uses for *Sphagnum* did not work on *Ambuchanania*, providing further evidence for their separation at a high taxonomic level.

References:

Crum, H.A. & Seppelt, R.D. (1999), Sphagnum leucobryoides reconsidered. Contr. Univ. Michigan Herb. 22: 29-31

Seppelt, R.D. & Crum, H.A. (2006) Flora of Australia 51: 406

Yamaguchi, T., Seppelt, R.D., Iwatsuki, Z. & Buchanan, A.M. (1990), Sphagnum (Sect. Buchanania) leucobryoides sect. et sp. nov. from Tasmania. J. Bryol. 16: 45-54.

Alex Buchanan, Tasmanian Herbarium, Hobart, Tasmania.

Bryological miscellanies from MELU

New to Australia

Lepidozia digitata Herz.

TAS: (1) Mount Field National Park, headwaters of Russell Falls Creek, in deep cleft of rock cliff; coll. Dec 2007. (2) Meander Forest Reserve, Split Rock, in narrow crevice in granitic rock; coll. Dec 2007. Specimens will be lodged in due course in HO and MELU.

Engel & Schuster (2001) remarked on the similar appearance of this little *Lepidozia* to *Telaranea centipes* on account of the small size, rather regularly shaped leaves and glaucous colour. I can vouch for this, as my field name for both collections was *T. centipes*! It is immediately recognisable as a *Lepidozia* when inspected under the microscope. Apart from differences in branching pattern, the dorsal leaf base is ampliate, the leaves are 15–20 cells wide in mid-leaf and irregularly arranged, and the leaf surface is minutely granulose. It is quite common in New Zealand, so it is not much of a surprise that it is also in Tasmania.

New to mainland Australia

Andreaea acuminata (Hook.f. & Wils.) Paris

Baw Baw Plateau, rock outcrop west of Mount Whitelaw, on granodiorite boulder in subalpine woodland, 1420 m asl; coll. Apr 2007. Specimens will be lodged in due course in MEL and MELU.

Murray (2006) noted that earlier records of this species from Australia turned out to be other similar species, and considered it to be confined to Tasmania and New Zealand. But considering other species that have turned up in the Baw Baws it was not surprising to find it mixed with some other *Andreaea* species at this site. The leaves lack a costa, have weakly but clearly crenate basal margins (at least on one side of the leaf), turgid spores 20–25 µm in diameter, and leaves only 2.5–3 times as long as wide, with a sheathing base and an obvious marginal sinus.

Dicranoloma trichopodum (Mitt.) Broth.

Baw Baw Plateau, confluence of West Tyers River, on *Nothofagus cunninghamii* about 15 m about ground level, 1150 m asl; coll. Mar 2007; det. N. Klazenga; MEL.

This unusual *Dicranoloma* has the look of *Dicranoloma menziezii* or a big *Ditrichum* or *Dicranum* at first glance, as it grows in short wispy tufts on the bark of trees in rainforest. However, the presence of a weak border in the lower part of the leaf, the narrow (< 0.8 mm wide) leaf, and strong single-celled marginal teeth only in the upper subula distinguish it well enough. It seems to be quite common in Tasmania and New Zealand, and usually grows high on tree stems (Klazenga 2003). Klazenga noted that this species does not fit well in either *Dicranoloma* or *Dicranum*.

New to Victoria

Plagiochila pleurata (Tayl.) Hook. & Tayl.

Headwaters of East Tanjil River, on *Nothofagus cunninghamii* branch, coll. June 2008. Specimens will be lodged in due course in MEL and MELU.

This species has been reported previously from New Zealand (where it is common) and from Tasmania and Queensland (where it is very rare). In Victoria it is known from this single collection on the south face of the Baw Baw Plateau, in cool temperate mixed forest. It is easily distinguished from other species known from Victoria by its more or less bifid leaves with (usually) a smaller apical lobe towards the ventral margin and often accessory teeth, mainly on the ventral margin. Under the microscope the leaf surface is covered with dome-shaped papillae. Less obviously, the branching is wholly lateral-intercalary or ventral-intercalary, never terminal. *Plagiochila fruticella* (New Zealand, Tasmania, Queensland) is very similar but has both terminal and intercalary branching, and the surface papillae are smaller and rather indistinct.

New to New Guinea

Bazzania gibba (Sande-Lac.) Schiffn.

PAPUA NEW GUINEA: upper slopes of Mt Wilhelm (3695 m), mixed with other bryophytes, coll. I.J. Willis Sep 1968, MEL-1047650.

This species was previously known only from the island of Java, where the few known collections date from the mid to late 19th century. It is very distinct in its falcate leaves, wide at the base and very narrow at the apex with three distinct apical lobes, and almost oblong underleaves that have chlorophyllose cells throughout. The type is in S (herb. Möller, ex herb. S.O. Lindberg), no. B14657(!).

Other interesting records

Frullania hattori Konrat & Braggins

TAS: Cradle Mountain – Lake St Clair NP, track to Mount Rufus, coll. Dec 2007; HO, MELU.

This is the only one of our *Frullania* species from New Zealand and Tasmania that has a papillose leaf surface (von Konrat & Braggins 2003). It was known previously only from three widely dispersed sites, in Hartz Mountains NP and Mt Field NP in the southeast and near Nietta in the northwest. This record is more or less equidistant between the latter two sites, which suggests that the species might have a more continuous range through central Tasmania. The identity of the specimen was kindly confirmed by John Braggins during the Tasmanian workshop in 2007.

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Ireland RR 1992. Studies of the genus *Plagiothecium* in Australasia. *The Bryologist* **95**: 221–224.

Klazenga N 2003. A revision of the Australasian species of *Dicranoloma* (Bryophyta, Dicranaceae). *Australian Systematic Botany* **16**: 427-471

Murray BM 2006. Andreaceae. *Flora Australia* **51:** 108-123

von Konrat MJ & Braggins JE 2003. A new and unusual species of *Frullania* (Jubulaceae) from Tasmania, Australia. *New Zealand Journal of Botany* **41**: 55–62.

David Meagher, School of Botany, The University of Melbourne, Victoria.

Three species regarded as New Zealand endemics, now recorded from Tasmania.

Castanoclobos julaceus (Hatcher ex. J.J.Engel) J.J.Engel & Glenny

Trichocolea julacea (*Castanoclobos julaceus*) was described by Hatcher (1958) based on a William Martin specimen from Stewart Island, at a locality (Sawmiller's Arm, Port Pegasus) whose identity is now uncertain, as the name does not appear on any modern map. The specimen was sterile and so the genus it belonged to was somewhat in doubt. It was placed in *Leiomitra* by Engel (1999) using just the type specimen. A fertile specimen was discovered at the Cascade Valley in South Westland in 2003 by Y.L. Qui and John Braggins, and last year, fertile specimens became available that were collected on Stewart Island by Colin Meurk and Hugh Wilson in 1980. On the basis of these fertile specimens, Engel and Glenny (2007) created a new genus for the species, *Castanoclobos* (from the Greek, castano = brown, clobos = a bird cage) and it was retained in *Trichocoleaceae*. The genus is unusual in having a well-developed trigonous perianth on top of a stem perigynium, both of which are densely hispid. Other species of *Leiomitra* have either no perianth or, as in the New Zealand species, *L. lanata*, a low perianth and a well-developed but glabrous coelocaule.

This species has generally been considered endemic to New Zealand, with no known published reports of it elsewhere. It is not cited in the Australian catalogue of liverwort and hornwort species (McCarthy 2003). During the workshop in December 2007 at Maydena, Tasmania, Peter Wellman collected *Castanoclobos julaceu*s at Marriotts Falls near the Tyenna River, and David Glenny found perianths at the same site, a large log in the spray zone of the waterfall. On seeing the specimen, Chris Cargill realised she had collected the

species the previous day on the slope at the side of the Strathgordon dam (*Cargill 1093*, CANB). At the time, those of us on the workshop believed these were the first Tasmanian collections of the species. This turns out not to be the case.

There are over a dozen collections of *Castanoclobos* at the Tasmanian Herbarium in Hobart, their locations ranging from Tasman Peninsula in the south-east, to the south-west and west, to as far north as Luina (a small town to the west of Waratah). The earliest collection dates from 1912 and was made by Leonard Rodway, Government Botanist at the time, from the Hartz Mountains area in the south. In 1979, David Ratkowsky examined this specimen, labelled *Trichocolea* sp., and commented that there were specimens in New Zealand with similar characteristics. All the remaining collections have been made since 1983. George Scott identified a specimen (J. Jarman Nov 1989, MELU H1157) as *Leiomitra julacea*, and was familiar with the species having collected it in New Zealand at the Cascade Valley in 1965.
Some specimens from Tasmania are epiphytic, supporting Hatcher's original observation of the New Zealand type which was queried by Schuster (2001).
The species is on the New Zealand Department of Conservation's threatened species list with the high ranking of Nationally critical. It appears to be much more common in Tasmania than New Zealand, and this will probably result in the qualifier "Secure overseas" being added to the New Zealand threat ranking.

Selected specimens examined: AUSTRALIA, Tasmania: Hartz Mts, May 1912, *L. Rodway s.n.* (HO 27629); Cape Sorell, road to Asbestos Point, March 1983, *J. Jarman 83/5* (HO); Wilson Bight, January 1987, *A. Moscal 13944* (HO); Corinna Road, near Luina, November 1989, *J. Jarman 89/20* (HO); Mt Hartz road at entrance to the National Park, September 1990, *P.J. Dalton 90.21* (HO); McKays Track, 3 km south of Scotts Peak Dam, February 1996, *A. Moscal 28090* (HO); Agnes Creek, Fortescue Forest Reserve, December 1998, *A. Moscal 30152* (HO); King River, Teepookana State Forest, 10 km SE of Strahan, May 1997, *H. Streimann 59550* (HO, duplicate from CANB); Marriotts Falls, December 2007, *P. Wellman s.n.* (HO 547523), *D. Glenny 10122* (CHR 595446, F). NEW ZEALAND: Westland, Martyr River, May 1965, *G. A. M. Scott* (CHR 426515 ex herb. J. Child and duplicate of OTA 25330).

Cephaloziella muelleriana R.M.Schust.
This tiny species, previously thought to be a New Zealand endemic, has been collected on many occasions over the past ten years from a 200 ha silvicultural trial site in southern Tasmania.
The description of *C. muelleriana* is based on a single specimen collected at the Whirinaki River, Bay of Plenty, New Zealand (Schuster 1996). It is characterised by an apparently unique feature in the genus of very long, narrow, thick-walled cells immediately below the perianth mouth. It is similar to *C. byssacea* but has sharply serrulate bract margins, and these often end in a hooked tip. The Tasmanian material has the distinctive perianth mouth cells and serrulate bract margins, but the hooked tips are only sometimes present. Species from this genus are difficult to identify, but we (Jean Jarman and David Glenny) have no doubt that the Tasmanian material represents this species.
In Tasmania, the species is known only from the Warra Long-term Ecological Research (LTER) Site, in an area where Forestry Tasmania has established a silvicultural systems trial. The area is located about 60 km west southwest of Hobart, and about 20 km inland from the town of Geeveston. The first collections of *C. muelleriana* were from mature wet sclerophyll forest dominated by mixed-aged *Eucalyptus obliqua*. However, the material was fragmentary, rare and sterile, and it was not clear whether it was different from the other *Cephaloziella* species present (also rare and sterile). Within two or three years of the forest being harvested and burnt, *Cephaloziella* species were flourishing in the regenerating coupes. Once perianths were produced there was no doubt that a species was present that was previously unknown in Tasmania. *Cephaloziella muelleriana* occurs mostly as straggling shoots though patches of *C. hirta*, but occasionally it forms small pure patches. Although not the most common *Cephaloziella* present, it was found in 14 burnt plots (3–5 years after treatment) across six coupes within the trial area, and also (rarely) from the unharvested forest, although not fertile there. Given its widespread occurrence in very young, regenerating forest, it is likely to occur elsewhere in Tasmania.

Specimen examined: AUSTRALIA, Tasmania: Manuka Road in the Warra Long-Term Ecological Research Site, November 2006, *J. Jarman s. n.* (HO 546907, CHR 577804).

Plagiochila fragmentissima Inoue & R.M.Schust.

This species was collected from the Warra LTER Site (see *Cephaloziella* above) in southern Tasmania, where it grows as an epiphyte on *Pomaderris apetala* in mature wet sclerophyll forest. The small 500 m^2 plot where it was collected on Manuka Road is currently the only known location for this species in Tasmania.

Shoots of this species have the older leaves broken off, with the oldest ones being broken near the base. The newest leaves are intact, but are difficult to remove from the stems without the leaf fragmenting. In all respects, it matches the description of *P. fragmentissima* (Inoue & Schuster 1971), including the mode of leaf fragmentation. The species was described in 1971 from the type only, and we are unaware of further collections made in New Zealand.

Dr M.-L. So (Hong Kong Baptist University) has seen a specimen of the Tasmanian species from the same location (duplicate of HO 531518), which she determined, as *P. gregaria.* She believes *P. fragmentissima* is probably not distinct from *P. gregaria* (Taylor) Hook.f. & Taylor but comments that an examination of the type is needed to be certain (pers. comm. to Jean Jarman). Indeed, the two species appear to be indistinguishable other than in the leaf fragmentation character. An examination of New Zealand material of *P. gregaria* shows that a few specimens have leaves that are inclined to fragment when they are removed from the stems, but rarely to the degree seen in the Tasmanian material. At present, we have chosen to treat the Tasmanian species as *P. fragmentissima* rather than *P. gregaria* because of the highly developed leaf fragmentation, which immediately distinguishes the species from all others in Tasmania. However, future studies may well result in it being subsumed into *P. gregaria*.

Specimens examined: AUSTRALIA, Tasmania: Manuka Road in the Warra Long-Term Ecological Research Site, April 2002, *J.Jarman s.n.* (HO 546905, duplicate CHR 577805); Manuka Road in the Warra Long-Term Ecological Research Site, May 2005, *J. Jarman & G. Kantvilas s. n.* (HO 531518, herb. M.L.So).

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We thank John Steel (OTA) and Nicole Middleton (MELU) for information on specimens, and to Chris Cargill for information on her collection of *Castanoclobos*. Thanks also to Gintaras Kantvilas for discussion of correspondence over *Plagiochila fragmentissima*.

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David Glenny, Allan Herbarium, Lincoln, New Zealand & Jean Jarman, Tasmanian Herbarium, Hobart, Tasmania

‘New Holland’ is not necessarily Australia

While pondering the mysterious provenance of a *Bazzania* species supposedly collected in Australia in the 1840s, I stumbled upon an interesting problem. None of the thousands of other *Bazzania* collections from Australia, New Zealand or anywhere within coo-ee could be matched to the type material. In fact, I could match it only with plants that have a tropical South American – Caribbean distribution. I began to suspect a labelling error. The original material from Lehmann’s herbarium was annotated ‘Nov. Hollandia’. A bit of research uncovered the fact that ‘New Holland’, the early name for Australia, was also the name of the Dutch-controlled territories in northern Brazil, centred on Recife. Although the Dutch ceded the territory to Portugal in 1674, the name ‘New Holland’ persisted and is still in use today in the names of many Brazilian industries and businesses. Problem solved, and a useful lesson learned: ‘New Holland’ does not necessarily mean Australia!

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Sesquipedalia verba bryologicae

Roman poet and writer Quintus Horatius Flaccus (65–8 BC), better known to us as Horace, coined the magnificent term *sesquipedalia verba* (words a foot and a half long) when counselling against bombast and pomposity in his *Ars Poetica*. A person of similar mind was German bryologist Otto Kuntze (1843–1907), who took a particular dislike to long Latin names. Kuntze’s clumsy attempts in the *Lexicon Generum Phanerogamarum* (1903) to simplify Richard Spruce’s names in the Lejeuneaceae were dismissed by his contemporaries and ignored by all subsequent taxonomists. But when one considers the following sesquipeds, perhaps he had a point.

Among the mosses, one magnificent binomial stands above all. Viktor Brotherus, perhaps in a rush of blood to the head, coined the 37-character gargantuan *Rhaphidorrhynchium pseudobrachythecium* (Broth.) Broth., along with numerous others of almost the same length such as *Rhaphidorrhynchium pseudocallidioides* (Broth.) Broth. (36), in volume 11 of the second edition of *Die Natürlichen Pflanzenfamilien* (1925). Regrettably neither of these marvellous names is now in use, and we must be content with Richard Zander’s 35-character binomial *Pseudosymblepharis syrrhopodontoides* (Dixon) R.H.Zander and Gary Smith’s 34-character *Polytrichadelphus pseudopolytrichum* (Raddi) G.L.Sm. Some distance behind is *Bryoerythrophyllum inaequifolium* (Taylor) R.H.Zander and *Hygroamblystegium austro-fluviale* (Müll.Hal.) Broth. (31).

The longest binomial in use among the liverworts and hornworts that I have come across is Pierre Tixier’s *Diplasiolejeunea drepanolejeuneioides* Tix., 36 characters long, although cheating a bit with the extra *i*. Following close on its heels are Yoshiwo Horikawa’s *Boninoleptocolea drepanolejeuneoides* Horik. and Rob Gradstein’s *Schiffneriolejeunea madagascariensis* (Steph.) Gradst. (35), with *Schiffneriolejeunea pulopenangensis* (Gott.) Gradst. and Franz Verdoorn’s *Schiffneriolejeunea omphalanthoides* Verd. (34) not far behind.

Some generic names of extraordinary length, such as *Pseudospiridentopsis* (20), *Canalohypopterygium*, *Leptopterigynandrum* and *Fuscocephaloziopsis* (19), and *Austrofossombronia*, *Protocephaloziella*, *Cladiantholejeunea*, *Dendromastigophora*, *Hepatostolonophora* and *Protocephaloziella* (18), are let down by relatively short specific epithets. And the longest of all, *Funariophyscomitrella* (21), has regrettably sunk into the dark depths of synonymy.

Schiffneriolejeunea pulopenangensis squeaks in as Australia’s longest binomial thanks to a single collection from Cape York Peninsula. By comparison with the behemoths of bryology already mentioned, other extant binomials in Australian and New Zealand bryology are mere wraiths: *Hepatostolonophora paucistipula* (Rodw.) J.J.Engel and *Dendromastigophora flagellifera* (Hook.) R.M.Schust. are I think our next longest, but muster just 30 characters each. Our longest moss binomial, *Polytrichadelphus magellanicus* (Hedw.) Mitt., is a relatively pathetic 29 characters long

Footnote:
Horace started his working life as a soldier and then became a public servant because there was no money in writing poetry — a story familiar to generations of Australian bryologists. His life changed when he obtained an estate from Gaius Maecenas, a patron of the Arts, which supported him financially for the rest of his life and enabled him to become a full-time writer. Any patrons of Bryology out there?

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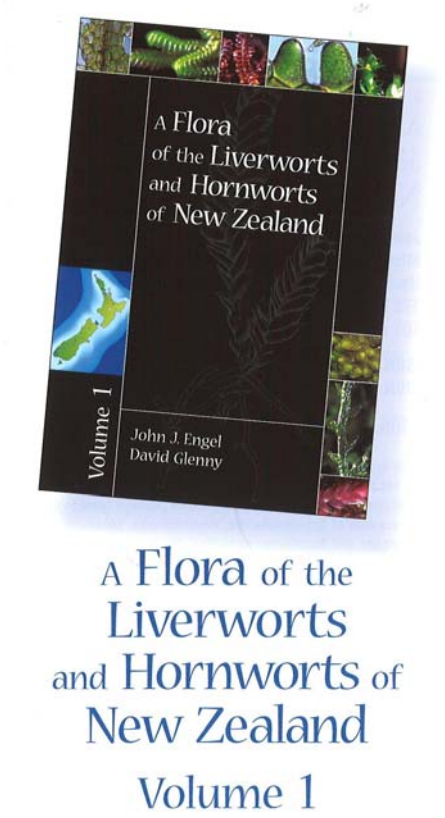
New Publication



This is the first of three volumes to describe and illustrate the liverworts and hornworts of New Zealand published by Missouri Botanical Garden Press. There are 595 species of liverworts and 13 hornwort species in 157 genera that are currently accepted. This volume provides keys and descriptions to 211 species. To complement the descriptions there are black-and-white plates and 101 colour images.

The strong affinities of the flora with temperate Australia, especially Tasmania, will make this publication a valuable acquisition for bryologists in the Australasian region.

Forthcoming Workshop

24th John Child Bryophyte Workshop

This workshop will be held from the 12th to 17th December 2008, in the Catlins area of southeast New Zealand. This is a fascinating area, which is species rich and provides a great opportunity to explore a broad range of indigenous vegetation. Microscopes will be available and a number of field trips are planned to encompass a variety of vegetation types – *Nothofagus* and podocarp, coastal, swamp.

Accommodation with laboratory facilities will be based at the Tautuku Outdoor Education Centre and numbers are limited. The Catlins is fairly remote, about 100km south of Dunedin and approx. 80 km west of Invercargill. Some transport will be available from Dunedin, an excellent starting/finishing point for a holiday.

For further information or registration of intent, please contact John Steel, Department of Botany, University of Otago, PO Box 56, Dunedin, New Zealand or email john.steel@botany.otago.ac.nz